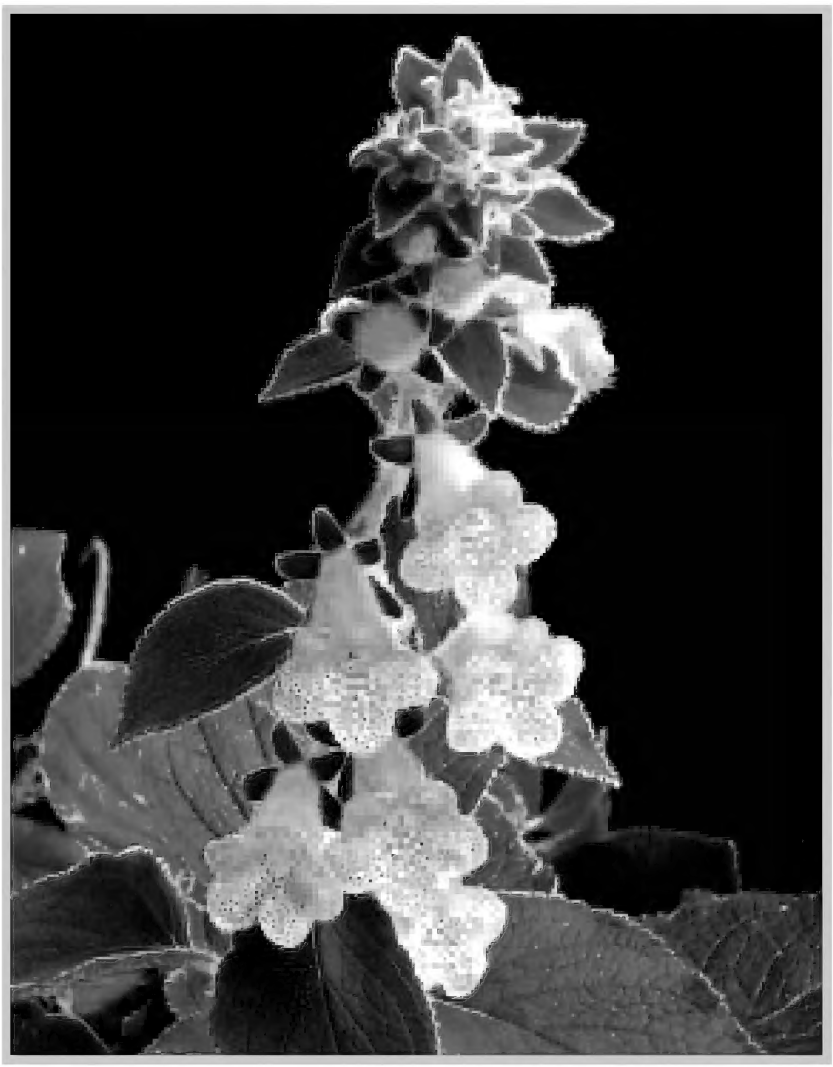
the
GLOXINIAN
The Journal for Gesneriad Growers
Vol. 51, No. 2 Second Quarter 2001

CELEBRATING OUR FIRST 50 YEARS 1951-2001



Kohleria rugata

American Gloxinia and Gesneriad Society, Inc.

A non-profit membership corporation chartered by the State of Missouri

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Bylaws: Copies of AGGS Bylaws are available to all members by writing to Pat Richards, 15105 S. Seminole Dr., Olathe, KS 66062-3004.

Chapters: Report changes of chapter presidents to the Chapters and Affiliates Chair and the editor.

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American Gloxinia and Gesneriad Society, Inc.

EDITOR

Jeanne Katzenstein <editor@aggs.org>
1 Hallvard Terrace
Rockaway, NJ 07866

EDITOR'S DEADLINES

First Quarter ..... October 10
Second Quarter ..... January 10
Third Quarter ..... April 10
Fourth Quarter ..... July 10

EDITORIAL STAFF AND CONTRIBUTING EDITORS

Frances Batcheller, Judy Becker, John Boggan, Carol Ann Bonner, Arleen Dewell, Maryjane Evans, Peter Shalit, David Turley

BUSINESS MANAGER

Michael A. Riley <riley2362@aol.com>
101 West 104th Street
New York, NY 10025

ADVERTISING MANAGER

Tom Bruning <advertising@aggs.org>
31233 Beechnut Road
Council Bluffs, IA 51503

MEMBERSHIP AND CHANGES OF ADDRESS <membership@aggs.org>

AGGS Membership Secretary
Bob Clark
118 Byron Avenue
Lawrence, MA 01841-4444

CONTRIBUTIONS AND INSURANCE

Helen Bortvedt <hmbort@olypen.com>
20 Beeson Road
P.O. Box 2584
Sequim, WA 98382-8870

AGGS Home Page: http://www.aggs.org

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The Journal for Gesneriad Growers

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Kohleria rugata
grown at the Smithsonian Greenhouses
(photo by Leslie Brothers)

CHAPTER PRESIDENTS

Arkansas	**Northwest Arkansas Gloxinia & Gesneriad Society —** Beth Tallant, 2103 SE 8th St., Bentonville, AR 72712
California	**American Gesneriad Society of San Francisco —** Harriette Poss, 12 Kelton Ct., San Mateo, CA 94403-4311
	Culver City — Charlotte Rosengrant, 2705 Krim Dr., Los Angeles, CA 90094
	Delta Gesneriad & African Violet Society — Oscar Faoro, 7361 22nd St., Sacramento, CA 95822
	Fresno — Sue Haffner, 3015 Timmy, Clovis, CA 93612
	Grow and Study — Al Striepens, 2225 Deepgrove Ave., Rowland Heights, CA 91748-4208
	Peninsula — Brigitte McKnight, 1109 Stafford Drive, Cupertino, CA 95014
Colorado	**Gloxinia Gesneriad Growers —** Jean Miller, 6661 Upham Dr., Arvada, CO 80003-3943
Connecticut	**Berkshire —** John Cacase, 1237 Durham Road, Madison, CT 06443
	Connecticut — Margaret Fargeot, 235 Alps Road, Branford, CT 06405
Delaware	**Delaware —** Carol Callaghan, 2806 Rickdale Road, Wilmington, DE 19810
Florida	**Caribbean Basin —** Timothy Anderson, 9995 SW 66th Street, Miami, FL 33173-1446
	Suncoast — Joe Lourey, 2905 Riviera Dr., Sarasota, FL 34232
	Tampa Bay — Jo Anne Martinez, 809 Taray de Avila, Tampa, FL 33613
Georgia	**Atlanta Gesneriad Interest Group** — William Crews, 5862 Musket Lane, Stone Mountain, GA 30087-1707
Illinois	**Northern Illinois —** Bob Nicholson, General Delivery, Dongola, IL 62926
Kansas/Missouri	**Heart of America —** Nancy Moerer, 413 NE 114th Terrace, Kansas City, MO 64155
Louisiana	**Bayou —** Earl Deroche, P.O. Box P, 155 North Airline Avenue, Gramercy, LA 70052
Massachusetts	**New England —** Dee Stewart, 1 No Name Road, Stow, MA 01775-1604
Michigan	**Southeastern Michigan —** Richard Holzman, 3836 Jennings, Troy, MI 48083
Minnesota	**Twin Cities Area —** Sandy Officer, 8920 Southwood Drive, Bloomington, MN 55437
Missouri	**Gateway West —** Gary Dunlap, 4189 Jarvis Road, Hillsboro, MO 63050
New Jersey	**Frelinghuysen Arboretum —** Nancy Leck, 34 Skyline Drive, Morristown, NJ 07960
	New Jersey — Dolores Reed, 59 Highland Road, Hackettstown, NJ 07840
New York	**Gesneriad-Dicts of Western New York —** Peter Thompson, 212 Locksley Rd., Syracuse, NY 13224
	Greater New York — Al Romano, 22 75th Street, North Bergen, NJ 07047
	Long Island — Paul Susi, 6 Upper Lane, Centerport, NY 11721
Oregon	**Mt. Hood —** Vivian Scheans, 4660 SW Dogwood Drive, Lake Oswego, OR 97035-8412
Pennsylvania	**Liberty Bell —** Laura Shannon, 8845 Norwood Avenue, Chestnut Hill, Philadelphia, PA 19118
	Pittsburgh African Violet & Gesneriad Society — Robert Lubinski, 438 Ridge Road, New Brighton, PA 15066
Tennessee	**Tennessee —** Julie Mavity-Hudson, 1015 Park Lane, Joelton, TN 37080
Washington	**Puget Sound —** Doreen Hovermale, 3840 N. Frace, Tacoma, WA 98407-1113
Washington, D.C.	**National Capital —** Gary Gordon, 120 Brinkwood Road, Brookeville, MD 20833
Canada	**Carefree —** Florence Duesterbeck, 2235 Montreal Street, Regina, Saskatchewan S4P 1L7, Canada
	Edmonton — Patricia Bell, 33 Ash Crescent, St. Albert, Alberta T8N 3J6, Canada
	Toronto — Susan Smith, 15 Montvale Drive, Scarborough, Ontario M1M 3E5, Canada
Sweden	**Gesneriasts of Sweden —** Ingrid Lindskog, Snickargatan 11, 903 60 UMEÅ, Sweden

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Color photo on page 33 (bottom) sponsored by the Tampa Bay Chapter

ADVERTISERS DIRECTORY

President's Message

Jon Dixon <president@aggs.org>
55 Tum Suden Way, Woodside, CA 94062

Fifty years ago when AGGS was in its infancy, the vast majority of the gesneriad species we grow today were only found in their native habitats, growing and reproducing just as they had for thousands of years, seemingly safe from human encroachment. The history of AGGS is concurrent with the most important period of discovery and introduction of new gesneriads. We enjoy today a surfeit of riches, with a variety of plants unimagined thirty years ago. But our bounty is also our greatest challenge. Just as we enjoy the variety of today we have to ask ourselves: "What will be the state of gesneriads in the future?" While botanists have been discovering and bringing back new species, the habitats that support these plants have been disappearing at a steady rate. As the vast forests are cleared for temporary agriculture and the natural populations of plants disappear, the burden on cultivation of the plants that remain becomes more critical. In the past when a rare plant in cultivation was lost, we always had the option of re-collecting it from nature. In the future that option will be severely limited by habitat destruction. Increasingly the plants we maintain in our collections are the only future these species have.

This is, of course, a sad situation for endangered plants. Cultivation is never an acceptable alternative to maintenance of the natural habitat. Cultivated plants rarely represent more than a tiny fraction of the variety found in the natural gene pool, are subject to viral infections, and also genetic degradation. As we breed generation after generation through self-pollination, we further limit the genetic diversity of a given species. And, lastly and most importantly, we must remember that while gesneriads enjoy a vital community of people who grow and study them, the great majority of plants that grow alongside gesneriads from myriad families are not cultivated and become extinct as fast as the forests are cleared.

We add to this task the large number of hybrids and cultivated varieties never found in nature which represent our best creative efforts and which also deserve to be preserved for future generations of growers. As we hybridize we create more variety; and consequently more plants in our growing inventory of gesneriads to preserve. So the challenge we face is to maintain as much of the existing variety of species and hybrids while creating and introducing new ones. From personal experience I can attest to the fact that as my collection gets larger it becomes more difficult to find the space and time to hybridize or otherwise add new varieties. But, at the same time, I feel a responsibility to keep my plants going, lest they fall out of cultivation. And, just as we individually grapple with this dilemma, we as a society of gesneriad growers face the same dilemma. Hopefully we will see AGGS continue to grow as new people take up the challenge and pleasure of growing gesneriads and who will, in turn, share in maintaining the growing pool of gesneriads in cultivation.

Jon

Special Contributions

Paul F. Kroll, Corresponding Secretary <pfkroll@worldnet.att.net>
4325 Two Rod Road, East Aurora, NY 14052-9693

FRANCES BATCHELLER ENDOWMENT FUND — $345

Carolyn Ripps, in lieu of speaker's fee from Greater New York Chapter
Frances Batcheller
New England Chapter
Josie Stefaniak
Corliss Engle
Doris F. Carson
Narges Berenji-Harley

ELVIN MCDONALD RESEARCH ENDOWMENT FUND — $80

Carrol A. M. Smith
Doris Carson
Leopoldo Leon
Narges Berenji-Harley

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Stanley Schwartz, in lieu of speakers fee from Greater New York Chapter
Sherry Burtchett
Carrol A. M. Smith
Carrol A. M. Smith, in honor of Dr. Penny L. Smith-Kerker
Nancy S. Hagerman
Long Island Chapter
Gloxinia Gesneriad Growers Chapter, in honor of Marlene Beam
Mrs. N. R. Henson
Zelda Isaacs
Lois Buschke, in memory of Susan Schlieder
Dorothy Raymond
Tampa Bay Gesneriad Society

AG(G)S Then and Now

1951 — 2001

Following a call for seeds in the editorial of the very first issue of THE GLOXINIAN, a single paragraph in the September-October, 1951 issue advertised seeds for three varieties of gesneriads—two of (florist) gloxinia hybrids and one of hybrid streptocarpus. The Seed Fund was born. In comparison, the first quarter issue for 2001 dedicated seven pages to the Seed Fund. Way to grow!

Seed Fund

Bob and Carol Connelly <seedster@netperson.net>
2391 Phillips Drive, Auburn Hills, MI 48326-2450

In line with the theme of this issue of THE GLOXINIAN, we are reprinting the list of seeds in the genus *Kohleria* that are currently available from the Seed Fund. It's a rather short list, but we would like to encourage you to try growing some of these from seed. It certainly takes longer than growing from rhizomes, but it can often be worth the wait. Please note that many of these are in limited supply, so we would also like to encourage donations to build our selection and supply.

Kohleria (D)
- *hirsuta* (LM)
- *hirsuta* USBRG96-163 (F,L)
- *hondensis* (LM)
- *rugata* USBRG95-010 (LM)
- *spicata* (M)
- *spicata* USBRG94-552 (M)
- *eriantha* × 'Bermuda Red' (L)
- hybrid mix

We would like to thank the most recent contributors to the Seed Fund for their generosity: Marlene Beam, John Boggan, Maryjane Evans, John Farina, Katherine Henwood, Richard Holzman, Charles Lawn, Mauro Peixoto, Jim Smith and Maureen Wilson.

ADDITIONS:

- *Didissandra frutescens* (H,M)
- *Gesneria cuneifolia* (H,F,L)
- *Gesneria pedunculosa* USBRG97-102 (S,T)
- *Primulina tabacum* (F,R)
- *Sinningia eumorpha* / Saltao (L)
- *Sinningia* lavender/purple mini mix (F,P)
- *Streptocarpus cyaneus* ssp. *long-tomii* (R)
- *Streptocarpus meyeri* / SE Transvaal (R)
- *Streptocarpus modestus* / Magwa Falls, Transkei (R)
- *Streptocarpus parviflorus* (white) (R)
- *Vanhouttea* 'Bruegger' (S,T)
- *Vanhouttea* 'Saint Hilaire' (S,T)

• denotes LIMITED quantities

DELETIONS:

Chirita dielsii
Columnea linearis 'Purple Robe'
Columnea purpusii
Columnea querceti
Gasteranthus corallinus GRF95120
Parakohleria sprucei GRF95137
Phinaea ecuadorana GRF8852
Sinningia iarae × 'Bewitched'
Sinningia 'Cherry Chips' hybrid mix
Sinningia speciosa hybrids 'California Minis'
Sinningia speciosa hybrids Double Brocade Mix
Smithiantha 'Sunset' × self
Streptocarpus 'Black Panther' hybrid mix

Seed Packets — $1.50 each

Please
- Make checks payable to the AGGS Seed Fund in U.S. funds
- To pay by credit card, send your credit card number, expiration date, and signature, and indicate if the card is Mastercard or Visa ($6.00 minimum)
- Provide a self-addressed, stamped envelope (non-U.S. orders may include International Postal Coupons or have the postage added to their credit card bill)
- List alternate choices
- Include your membership number (first number on your mailing label)

New *Kohleria* Slide Program Coming Soon

Thanks to John Boggan and Jeanne Katzenstein, we will soon have a new slide program on ***Kohleria.*** This will be an exciting addition to our series on specific genera within the Gesneriad family. Contact Dee Stewart for an update on availability.

As a companion to the ***Streptocarpus*** **Species** program, the ***Streptocarpus*** **Hybrids** program is now available. This reviews the historical hybrids through the work being done by hybridizers today.

As a reminder, the following programs are also available: Introduction to Gesneriads, Tampa Convention 2000, Nashville Convention 1999, *Achimenes, Chirita, Sinningia*, The Companion Genera (*Nematanthus* and *Codonanthe*).

Programs can be reserved by mail to Dee Stewart, 1 No Name Road, Stow MA 01775-1604 or email to dee.stewart@110.net. Specify the program to be reserved and the date the program is required. Since new programs are very popular, it is helpful if you provide as much lead time as possible, provide alternate dates, or alternate programs that would be acceptable. Program rental of $20 U.S. payable to AGGS must be received before the program can be shipped.

Kohleria 'Queen Victoria'
(hybridized and photographed by John Boggan)

American Gloxinia and Gesneriad Society, Inc.

45th Annual Convention, 2001
July 3 to July 8, Kansas City, Missouri

Call for 2001 Annual Membership Meeting

The Annual Meeting of the members of the American Gloxinia and Gesneriad Society will be held on Friday, July 6, at 12:00 noon for the purpose of transacting business which may properly come before the meeting.

Call for 2001 Board of Directors Meetings

The Board of Directors meeting will be held on Tuesday, July 3, 2001, at 1:00 P.M., for the purpose of transacting business that may properly come before the meeting. A special Board meeting will be held on Friday, July 6, at 4:00 P.M. A meeting of the new Board will be held on Sunday, July 8, at 9:00 A.M.

Peter Shalit
Recording Secretary

Nominating Committee Report

The following members have agreed to have their names put in nomination as directors for a three-year term ending in 2004:

Carol Ann Bonner	Nashville, Tennessee
Doris Brownlie	Mississauga, ONT Canada
Connie Leifeste	Woodway, Texas
Bill Price	West Vancouver, BC Canada
Peter Shalit	Seattle, Washington
Paul Susi	Centerport, New York
Fay Wagman	Pittsford, New York

AGGS Nominating Committee: *Paul Kroll, Chair*
Marlene Beam
Bill Price

Think AGGS Auction ...

...when potting your gesneriads, shopping and browsing, cleaning out the closet, packing for convention. Start looking for donations that are gesneriad and/or horticulturally related to bring to convention, especially live plant material, to benefit the Frances Batcheller Endowment Fund. If you personally cannot attend convention, you may mail any donations to Grace McCurnin, 6812 Reeds Road, Overland Park, KS 66204 by July 1st.

Support AGGS — First Donate, Then Bid!

Goin' to Kansas City . . .

Don't miss the opportunity to come to Kansas City, Missouri, the site of our first two conventions, and be part of the 50th Anniversary Celebration of the founding of the American Gloxinia and Gesneriad Society and publication of the first issue of THE GLOXINIAN.

Convention Schedule Highlights — Changes in the convention schedule from previous years:

- There will be a continental breakfast prior to the Thursday tour.
- The Wednesday morning opening breakfast begins a half hour later than previous conventions and will be held in Skies Restaurant at the top of the Hyatt overlooking Kansas City.
- There is only one lecture on Saturday morning providing more time for visiting the flower show and other convention activities.
- The flower show and plant sale will be open until 3:00 p.m. on Saturday afternoon giving time after the Saturday Luncheon for viewing and purchasing plants.

The Friday evening Flower Show Awards Banquet will be highlighted by a special address by our Society's Founder, Elvin McDonald, followed by the Frances Batcheller Endowment Fund Live Auction.

On Saturday evening we will walk via a covered walkway from our hotel to the closing event at the recently restored Union Station. Before dinner we will be treated to a skit performed by two Union Station Players recounting an entertaining history of Union Station. Our Barbecue Dinner will be catered by K.C. Masterpiece. Michael Riley will then close our 50th Anniversary Convention Celebration.

Union Station is a beautifully restored 1914-era train station. It now houses Science City, restaurants, retail shops, live theater, extreme screen theater, and exhibits while still retaining the flavor of an earlier time. A list of daily activities is available at the information counter in the Grand Hall. On the Convention Registration Form, you may sign up for an $8.00 reduced-rate admission ticket (regularly $12.50) to Science City. This ticket will be in your registration packet and will be valid for use any time during the week of our convention. Science City is open 9:30 a.m. to 6:00 p.m. daily.

A special exhibit of over 200 artifacts recovered from the Titanic wreckage will be on display at Union Station from April 14 to September 4, 2001. Tickets for this can be purchased on your own for $12.00 per person. Visit the Science City/Union Station Web Site at <www.sciencecity.com> or call 1-877-SCI-CITY (724-2489) for further details on the variety of events at this historic Kansas City landmark.

Trip to Powell Botanic Gardens and Longview Perennial Gardens

Board the bus on Thursday morning for a special "Behind the Scenes Tour" of Powell Gardens located about 40 miles east of Kansas City in Kingsville, Missouri. A private, non-profit botanical garden since 1988, the 915 acres include a three-acre perennial garden containing over 1200 varieties of plants hardy to the area featuring staggered blooming times. The daylilies

should be at their peak at the time of our visit. A new Island Garden opens in April featuring a three-pooled water garden filled with an array of lotus, Victoria and water lilies. Our tour includes the Indoor Conservatory, the surrounding outdoor Terrace Gardens, a walk through the Wildflower Meadow, and a stroll in the cool shade of the Rock and Waterfall Garden and the Perennial Garden. Other garden attractions include The Nature Trail, and demonstration vegetable gardens. We will also have a tour of the growing greenhouses and interpretation by a member of the horticulture staff followed by a box lunch in the air-conditioned Visitor's Center adjoining the conservatory and gift shop. Air-conditioned buses will transport us between different garden locations, but there will be some walking so be sure to dress for hot weather and wear comfortable walking shoes. For more information visit the web site at <www.powellgardens.org>.

On our return trip to the hotel from Powell we will make a brief stop at Longview Perennial Gardens and Greenhouses. Longview has some small demonstration displays and a large variety of perennials, annuals, herbs, trees, shrubs, vines, grasses, water plants, and some specialty plants. They also sell garden supplies and some garden-related gift items.

Convention Speakers

Friday morning our speaker will be Donald L. Josko, a national speaker and plant consultant to ornamental plant growers, from Sioux Falls, South Dakota. His lively presentation on "What's Bugging Your Plants" will hold you in rapt attention and provide you with practical information. He encourages audience participation, so come prepared with your questions on pests, diseases, soil, water, and plant nutrition.

Friday afternoon Jim McKinney will take us on an unforgettable journey into the world of Lilliput, the miniature landscapes that can be created in a terrarium or tray landscape planting. He will bring planted replicas of antique Wardian cases from Victorian and Edwardian England. Jim is an enthusiastic, long-time grower of gesneriads and the proprietor of McKinney's Glassehouse in Wichita, Kansas. He will keep you entranced as he presents examples of how to prepare these diminutive "plant worlds".

Saturday morning David Zaitlin will guide us through a fifty-year history of sinningias, spanning the lifetime of our Society. A plant scientist, Dave has been growing and hybridizing sinningias for twenty-five years. He is the hybridizer of *Sinningia* 'Carnaval' and co-hybridizer of *Sinningia* 'Amizade' with Mauro Peixoto.

Elvin McDonald, founder of AGGS and Senior Garden Editor of *Traditional Home* magazine, will delight us with a special presentation at the Friday evening Banquet as he looks back over the last 50 years of gesneriads and fast forwards to the year 2051.

Michael Riley, past president, long-time member, and Business Manager of AGGS, will present closing remarks focusing on "proceeding forward" at our Convention Celebration on Saturday evening after our Barbecue Dinner at Union Station.

... Kansas City, here we come ... 2001!

Additional Convention Information and Dates to Remember

April 30	Deadline for early admission to plant sale (10:00–10:30 p.m. Thursday, July 5)
June 1	Convention Registration Deadline. After this date registration for activities will be on a space-available basis and subject to a $25 late fee.
June 10	Deadline for Judging School Registration and Commercial and Educational Exhibit Registration.
June 12	Hotel Registration deadline to guarantee convention room rate.

The AGGS Convention Web Address — for registering for the convention online, visit the AGGS web site at <http://www.aggs.org/convention.html>.

Special Discount Travel Offer from Southwest Airlines — Southwest Airlines is offering a 10% discount on most of its fares for air travel to and from the American Gloxinia & Gesneriad Society Convention. You or your travel agent must call Southwest Airlines Group and Meetings Reservations at 1-800-433-5368 and reference R3746. Reservations Sales Agents are available 8:00 a.m. to 5:00 p.m. Monday–Friday, or 9:30 a.m. to 3:30 p.m. Saturday and Sunday. You must make reservations five or more days prior to travel to take advantage of this offer.

Touring Kansas City — Part II

Kansas City Convention Committee of Five

As you make your convention plans, consider visiting the following sites, and don't forget to check out Kansas City's website (www.kansascity.com):

Kansas City Zoo (www.kansascityzoo.org) — The Kansas City Zoo has been updated and expanded to its present day "animal-friendly" environment. Enter through the gift shop, IMAX theatre, and education center. From there, explore Australia, where wallabies and kangaroos hop freely through their environs. The children's area includes friendly petting zoos, barn, and a sea lion exhibit including performances. These two areas of the zoo are linked by a miniature train that offers rides at minimal cost. Perhaps the most intriguing exhibit is Africa where the animals roam freely in realistic settings while the visitors are confined to narrow, protected walkways. Cross a large bridge to an eating/picnic area, which contains boardwalks through additional exhibits; again, the animals roam freely, the visitor does not! Open daily 9-5, $6 adult, $3 ages 3-12, $2 special admission on Tuesdays for all visitors. Expect a lot of walking!

Kaufman Stadium at Truman Sports Complex (www.kcroyals.com) — One of major league baseball's most beautiful parks features fountain displays in the outfield which are activated between innings and are colorfully lit at nightfall. This user-friendly ballpark, featuring real turf, is a beautiful venue for spending summer nights! It is easily accessible from two major interstates which cross through Kansas City. Stadium tours daily; Houston Astros in town July 6-8. Ticket prices range from $7 (general admission, in either outfield, where the most fun is to be had!) up to $19 for club level.

Independence, Missouri — The home of Harry Truman, with additional historical ties, affords visitors a full day of sites. First, visit the Truman Library and Museum (www.trumanlibrary.org) for a retrospective visit through a crucial time period in our nation's history. Visit Truman's home, and take a self-guided walking tour through the neighboring area including Independence Square, which includes the courthouse where Truman presided as a county judge. The Square also boasts restaurants, antique and book stores, and many specialty shops. Consider touring Vaile mansion, a Second Empire Victorian mansion featuring hand-painted and stencilled ceilings, and the Bingham-Waggoner Estate, home of Missouri artist George Caleb Bingham. Finally, see the RLDS Temple and Mormon Visitors Center (www.lds.org), world headquarters of the Reorganized Church of Jesus Christ of Latter Day Saints. The temple, visible for miles, spirals 300 feet above the skyline.

Jesse James Historic Sites — Son of a Baptist minister, Jesse James was born in Kearney, Missouri, just north east of Kansas City on I-35. James became one of the most bold and flamboyant train/bank robbers in our nation's history. Step back in time by visiting the James farm and museum, bank museum, and the Claybrook Home and Mt. Gilead Church and School.

Overland Park (Kansas) Arboretum & Botanical Gardens (www.opkansas.org/html/arboretum.html) — This beautiful newly developed area features an Environmental Education Visitors Center and almost

five miles of wood chip hiking trails with two 75-foot bridges traversing eight different biomes, or ecosystems. The trails are more challenging along limestone bluffs which rise high above the southern banks of Wolf Creek. Also available is a much shorter half-mile asphalt trail. The Gardens are easily reached via ADA-approved sidewalks which lead from the parking area. The Visitors Center includes an eatery and gift shop. Open 7–5 year-round; donations accepted.

Oak Park Mall and Rainforest Café (www.rainforestcafe.com) — Some of Kansas City's finest shopping is located in this suburban mall, including traditional anchor stores and over 185 specialty shops and restaurants. Consider dining at the Rainforest Café, which features the cuisines of Mexico, Asia and the Caribbean. Big kids and little kids alike will love the simulated thunderstorm and foggy atmosphere at this adventurous eatery!

Casinos — If you like to "test your luck", Kansas City is your kind of town. There are four casinos within a 15-minute driving distance of the hotel. If you don't want to drive, a shuttle bus makes regular stops at the Flamingo Casino, Harrah's Casino and the Station Casino. The cost is $1.00; return in 3 hours, and the return trip is free.

Antiquing — is a must in the Kansas City area. Drive east to Independence and find AntiqueLand, USA (www.antiquelandusa.com), which features 450 dealers in a 40,000 sq. ft. building. A second outlet exists in quaint Prairie Village, Kansas, a suburb just south of downtown Kansas City. In Grain Valley, ten miles east of Independence, visit the Brass Armadillo (www.brassarmadillo-kc.com), the area's largest antique mall. It boasts over 525 dealers in a 42,000 sq. ft. facility.

Weston, Missouri (www.ci.weston.mo.us/index.html) — If you prefer quaint little towns, then head north about 30 minutes to Weston, home of many unusual antique shops, an ice cream parlor, and tobacco drying warehouses; you'll also find good home-cooking at the Weston Cafe. Please don't leave town without going to church, well, it used to be a church. It is now the home of Pirtle's Winery, famous for its honey Mead wine. Mrs. Pirtle is always hospitable and generous with her samples. McCormick's distillery also offers tours; can't guarantee samples!

The Cultivated Species of *Kohleria*

John Boggan <bogganj@yahoo.com>
Dept. of Botany, NHB 166, Smithsonian Institution
Washington, DC 20670

Anybody who has seen a kohleria in bloom knows instantly why this genus is so appealing. The brightly colored flowers typically sport an exotic contrasting pattern of lines or spots. While the cultivars are better known to growers, many of the species are also worth growing and are frequently quite different from many of the more common cultivars. Unfortunately, there is still much confusion surrounding the names of the cultivated species (Boggan & Kvist 1993). Since the revision of the genus in 1992 by Kvist & Skog, there has been a renewed interest in the genus. New species as well as new collections of well-known species have been introduced, and there has been a flurry of hybridizing. Many of the species still have untapped potential for producing new cultivars. The genus is also interesting from an ethnobotanical perspective (Kvist 1986).

The genus *Kohleria*

Kohleria is a strictly New World genus and is classified in tribe Gloxinieae. Closely related genera are *Diastema, Gloxinia, Koellikeria, Pearcea,* and *Moussonia*; intergeneric hybrids have been produced with all these genera. Like most other members of the tribe, the genus *Kohleria* is characterized by having semi-inferior ovaries and (usually) scaly rhizomes. Although the scaly rhizomes of some kohlerias are among the largest in the tribe, the plants often lack a definite dormant period. The plants can be small herbs or, more typically, tall unbranched or sparsely branched shrubby herbs, rarely becoming somewhat woody. The entire plant is typically hairy, and this is reflected in several species names: *K. hirsuta, K. eriantha, K. lanata*, and *K. villosa*. The flowers are usually showy and brightly colored, with 5 separate (sometimes partially united) nectary glands and a distinctly bilobed stigma. Hummingbirds seem to be the primary pollinators. The fruit is a dry (rarely fleshy) bivalved capsule. The genus ranges from southern Mexico south to northern Peru and east across northern South America to the Guianas, with the largest number of species occurring in Colombia. For all species and hybrids the chromosome number is $n = 13$; no polyploids are known. All the species seem to be interfertile to some extent, although interspecific hybrids frequently lack pollen. Natural hybrids are common, making identification and species circumscriptions difficult. To compound the problem, some of the species are very widespread and variable, and may hybridize with different species in different parts of their ranges.

For practical purposes, the species can be placed in two groups: forest understory species with fleshy capsules (*K. amabilis, K. inaequalis, K. villosa,* and probably *K. grandiflora*) and taller species of open areas with dry capsules (most of the other species). The understory species are generally smaller, often do not produce scaly rhizomes (but may produce stringy rhizomes, especially if stressed) and often lack a dormant period completely; they require less light but appreciate higher humidity. Members of this group generally have showier flowers with a broad limb, and have been used extensively in hybridizing. The taller species generally have strongly tubular

flowers with a small limb, and usually require high light levels to grow and bloom well. Members of this group are less commonly grown due to their light and space requirements and relatively small flowers, but they are otherwise undemanding and generally easy to grow, and can be quite floriferous.

History of the genus

The first plant that we now know as a kohleria was given the name *Gesneria tubiflora* in 1801 by A.J. Cavanilles. The genus *Kohleria* did not yet exist and most New World gesneriads with tubular red or orange flowers were placed in the genus *Gesneria*. Over the years new species were described in *Gesneria, Achimenes,* and several new genera: *Kohleria, Tydaea, Isoloma,* and *Sciadocalyx*. The genera *Achimenes* and *Gesneria* were eventually restricted to groups of Central American and Caribbean species, respectively. Of the remaining names, *Kohleria*, described in 1847 by E. Regel, was the oldest and thus must take priority for this group of species although the names *Isoloma* and *Tydaea*, both described in 1848, persisted well into the 20th Century. In an article titled "The Gay Gesnerias" in the very first issue of THE GLOXINIAN, Peggie Schultz briefly discussed *Isoloma hirsutum* (probably *K. eriantha* Hort.) and *Isoloma bogotense* (now *K. amabilis* var. *bogotensis*). Several other species have been classified in the genus *Kohleria* over the years but were later removed by Hans Wiehler to the genera *Moussonia* and *Parakohleria* (now *Pearcea*).

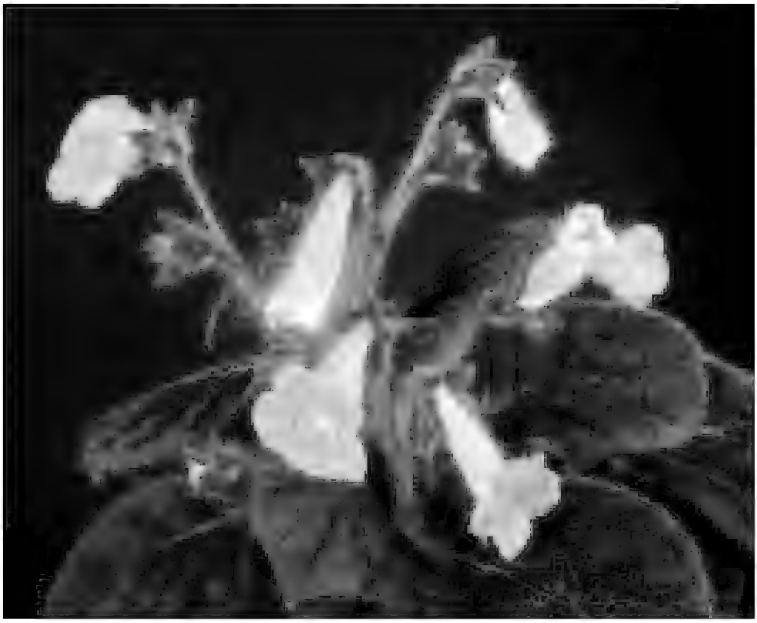
Like many other New World gesneriads, kohlerias were very popular in Europe from the moment they were introduced and were frequent subjects of illustrations in the early botanical and horticultural journals. Hybridizing began almost immediately, and the 19th Century saw a "golden age" of *Kohleria*, although the plants were then known under a variety of genus names. Old horticultural journals have mouth-watering color illustrations of hybrids and hundreds of cultivar names can be found in the literature. Many of these early hybrids involved species that have only recently been re-introduced. By the early 20th Century, nearly all of these cultivars were extinct and the genus was nearly unknown in cultivation. The genus languished until the 1960s or so, when several hybridizers in the United States began to collect the few species and even fewer hybrids remaining in cultivation, intercrossing them to produce a new generation of hybrids. Plants were imported from Europe or collected in the wild, prompting taxonomists to begin to sort out the names of the cultivated species. The number of cultivars and species in cultivation has steadily increased since then, and kohleria hybridizing has undoubtedly been stimulated by the many new wild collections that have been introduced to cultivation.

The species

Of a total of 17 species recognized by Kvist & Skog, at least 14 are now in cultivation in North America. There have also been many new wild collections of species that have been cultivated for many years, or were once cultivated and later lost (i.e., *K. hondensis*). The nomenclature used here is primarily based on the 1992 revision of the genus by Kvist & Skog, with some of my own observations thrown in. Superceded names for some of the species appear in parentheses.

K. allenii is a tall-growing species with leaves in whorls of 3 or 4. The entire plant is covered with glandular hairs and bears raceme-like flowering stems producing 1-2 flowers in the axils of reduced leaves. The flowers are

Kohleria villosa near Santo Domingo, Ecuador
(photo by L. Kvist, courtesy of the Smithsonian Institution)



Kohleria amabilis
(photo from AGGS archives)

unlike those of any other Kohleria, and more like those of a Capanea: large and campanulate, yellow or greenish yellow with red or purple blotches, with strongly reflexed lobes. The unusual flowers are thought to be bat-pollinated. The species was introduced and described in 1968, and is named for discoverer Paul Allen. Distribution: Costa Rica and Panama.

Kohleria allenii requires intense light, even full sun, to grow and bloom well. It is not otherwise difficult to grow, but due to its size will probably never be very popular. I've had good luck growing this species on a sunny west windowsill and have found that the plants benefit from the addition of lime to their soil. This species has not been used much in hybridizing but has the potential to produce plants with large, unusual flowers. The species was collected again by the Gesneriad Research Foundation in Costa Rica in 1994, and plants are currently being distributed by the GRF (GRF 9457) and the Smithsonian Institution (USBRG 98-109).

K. amabilis: As circumscribed by Kvist & Skog, *K. amabilis* occurs in two varieties that differ primarily in flower color. The plants are small weak-stemmed herbs, with variable foliage and showy flowers produced usually 1 per axil, with a large yellow (var. *bogotensis*) or white or pink (var. *amabilis*) limb with red or purple markings. The species is apparently rare in the wild, occurring in a very restricted area in central Colombia. Due to their relatively small size, ease of culture, and showy flowers, both varieties of *K. amabilis* have been very important in hybridizing, and virtually all modern hybrids can trace their ancestry back to one or both.

K. amabilis* var. *amabilis (*K. amabilis*): Plants identified as *K. amabilis* var. *amabilis* in cultivation generally have leaves with purplish blotches on the underside, resulting in a mottled pattern on the upper side. The flowers are generally large, with a white or pale pink limb with red to purplish spots. The cultivated plants usually lack pollen, and may be of hybrid origin. A more recent collection, obtained from the Marie Selby Botanical Gardens and distributed by the Smithsonian Institution as USBRG 2000-126, may produce pollen. Despite its rarity in the wild, *K. amabilis* var. *amabilis* is widely cultivated in tropical America, and the species or hybrids closely resembling the species have been collected in Cuba, Panama, Ecuador, and elsewhere. Plants listed in catalogs as *K. amabilis* will usually be var. *amabilis*. The name means "lovable" or "pleasing"; the English word "amiable" comes from the same root, and this is certainly an amiable plant.

K. amabilis* var. *bogotensis (*K. bogotensis*): Early descriptions of this plant describe it as almost identical to *K. amabilis*, differing only in flower color. However, most growers have ignored the varietal status of *K. amabilis* var. *bogotensis*, continuing to grow it as a species, *K. bogotensis*. Plants identified as *K. bogotensis* in cultivation generally have dark leaves with a solid purplish red underside, sometimes with an iridescent sheen or silvery pattern on the veins. The flowers are yellow with orange or red spots. There have been no recent wild collections and it's difficult to determine which, if any, of the cultivated plants most closely resemble the natural variety. The various cultivated plants bear little resemblance to each other, aside from having yellow flowers. Two relatively recent introductions, *K. bogotensis* 'Gray Feather' and Selby's *K. bogotensis* W-2556, are more robust plants with larger flowers that do not produce pollen and are apparently hybrids. The name *bogotensis* refers to the plant's origin near Bogota, Colombia.

K. anisophylla: see *K. villosa* var. *anisophylla*

Kohleria bella is still treated by most growers as a species, but is a natural hybrid and will be treated as a cultivar, *K.* 'Bella', in the new *Kohleria* Register. Although originally described as a species, the plant was originally collected in a garden in Costa Rica. No wild populations are known and all plants in cultivation have been propagated vegetatively from the single original collection. The name "bella" means "pretty", but in my opinion this could apply to just about any kohleria!

K. bogotensis: see *K. amabilis* var. *bogotensis*

K. digitaliflora: see *K. warszewiczii*

***K. eriantha* Hort:** Although *Kohleria eriantha* is considered by Kvist & Skog to be a synonym of *K. hirsuta*, the disposition of plants cultivated under this name has been a vexing problem. The plants differ from typical *K. hirsuta* in having red-edged leaves and larger flowers with a broader limb, usually on pedunculate inflorescences. These plants may be natural variants of *K. hirsuta* with unusually large flowers, or may represent natural hybridization with another species, e.g., *K. trianae*. Other plants grown as *K. eriantha* may be artificial hybrids involving such plants. The name *K. eriantha* persists in horticultural circles and my only suggestion is to refer to these plants under the collective name "*K. eriantha* Hort." with the understanding that they probably do not correspond to the original concept of this name. Ironically, these plants were introduced to cultivation under the name *Isoloma hirsutum* in the first place! The name "eriantha" means "woolly flower".

K. grandiflora is a moderately tall species with unusually long hairs on the stems and petioles. The flowers are large (hence the species name) and bright red. One odd characteristic of this species is its large, leafy calyx lobes. Not to be confused with *K.* 'Grandiflora', a name of uncertain origin that appeared in the 1985 *Kohleria* Register. Distribution: southern Colombia and northern Ecuador.

Kohleria grandiflora is a new species that was only described in 1992 by Kvist & Skog. It seems to be a close relative of *K. inaequalis*. Although originally known only from southern Colombia, a recent collection from northern Ecuador with atypically small calyx lobes has been identified as *K. grandiflora* and is in limited cultivation. This plant is still poorly known. Although easy to grow, I have never seen flowers on it under a variety of cultural conditions. I suspect cool temperatures are required to trigger blooming. The plant sends out multitudes of stringy rhizomes without ever forming proper scaly rhizomes, and probably forms large clonal colonies in the wild.

K. hirsuta is a widespread and variable species. The plants tend to be large, shrubby, and somewhat weedy. The red or orange flowers are strongly tubular with a small limb, although some larger-flowered natural variants have been distributed as *K. eriantha* (q.v.). Kvist & Skog identify two varieties, var. *hirsuta* and var. *longipes*; only the former is known to be in cultivation. Distribution: Colombia east to French Guiana and south to Ecuador.

Kohleria hirsuta is easy to grow, and a recent collection from Ecuador, distributed by the Smithsonian Institution as USBRG 96-163, is quite compact and free-flowering. *Kohleria hirsuta* forms natural hybrids with several other

Kohleria allenii
(photo by M. H. Stone)

Kohleria tubiflora
(photo by M. H. Stone)

Kohleria warszewiczii (digitaliflora)
(photo by M. H. Stone)

Kohleria inaequalis
(photo by John Boggan)

species throughout its range. A plant from Trinidad that has been distributed as *K. hirsuta* 'Trinidad' is apparently a natural hybrid of *K. hirsuta* and *K. tubiflora*. However, it's not clear whether this collection is still in cultivation; all plants I have seen labeled as 'Trinidad' have turned out to be 'Dark Velvet', a hybrid that has 'Trinidad' as one parent. Kohlerias cultivated, or occasionally escaping from cultivation, in the West Indies appear to be hybrids of *K. hirsuta,* possibly with *K. amabilis* var. *bogotensis* or other species in their background. They have been introduced as *K.* 'Jamaica Red', *K.* 'Bermuda Red', and *K.* 'Grenada'. The name "hirsuta" means "hairy", although this is rather redundant in *Kohleria.*

K. hondensis is closely related to *K. tubiflora*, being distinguished largely by having a smaller flower. Flowers are produced from one to several per axil. The flowers are yellow but the tube is densely covered with long orange hairs, with tiny red speckles on a very small yellow limb. Distribution: Colombia.

Kohleria hondensis is an easy species to grow but its appearance can vary considerably, depending on cultural conditions. In the wild the plants grow in full sun on exposed, rocky slopes. Stressed plants will bloom at a very small size and produce relatively few flowers; a pampered plant will grow much taller and can be quite floriferous, more than making up for the small size of the flowers. All plants now in cultivation are apparently derived from a single collection from Colombia, collected by Lars Kvist & Ximena Londoño in 1987 and distributed by the Smithsonian Institution with the accession number 87-114. The species is named for Honda, Colombia.

K. inaequalis is a widespread, extremely variable, and confusing species in the wild. Kvist & Skog recognize three varieties: var. *inaequalis*, var. *lindenii*, and var. *ocellata*. The varieties are themselves quite variable, and many intermediates occur between them. The plants are usually low-growing and have neither scaly rhizomes nor a dormant period, except perhaps when stressed. The flowers are usually tubular and brilliant red with dark purple, almost black, markings. Plants with distinct "eyespot" markings were originally described as *K. ocellata*, now regarded as a variety. Plants sometimes have red hairs and the name *K. magnifica* has been applied to large-flowered collections with red hairs on the stems and petioles. Distribution: Colombia and Ecuador.

All plants now in cultivation are probably *K. inaequalis* var. *lindenii*. This species is uncommon in cultivation although I have not found it to be especially difficult to grow. Growing it well, and flowering it, are another matter entirely. It requires less light, more humidity, and cooler temperatures than most kohlerias to grow well, and can be a shy bloomer. However, the flowers have a brilliance that I don't see in many other kohlerias, and the red hairs of some collections are quite striking. It's a shame more hybridizing hasn't been done with this species. The name "inaequalis" means "unequal" and apparently refers to unequal leaf bases in the original description, but this does not seem to be a characteristic of the species in general.

K. lanata: see *K. rugata*

K. magnifica: see *K. inaequalis*

K. ocellata: see *K. inaequalis*

K. peruviana is similar to *K. hirsuta* and is probably closely related to that species. The plant is generally more robust, with woollier stems and larger orange or yellow flowers. As the name implies, the species comes from Peru. This species is uncommon in cultivation, probably due to its size.

Kohleria rugata (*K. lanata*) comes from the states of Guerrero and Chiapas, Mexico and despite its relatively restricted range is a variable species. The plants are generally tall-growing, densely covered with white hairs, with one flower per axil. Like many achimenes, they sometimes produce aerial rhizomes in the leaf axils. *Kohleria rugata* is one of the few species whose rhizomes have a definite and long dormant period.

There are at least two very different collections now in cultivation. A small-growing collection of unknown origin with orange-red flowers was grown in the 1980s and possibly earlier as *K. lanata*, and is still in limited cultivation. A much larger plant was collected more recently in Chiapas by Dennis Breedlove (Breedlove 71052, distributed by the Smithsonian as USBRG 91-038 and USBRG 95-010). This form has very large, very handsome pink flowers and deserves to be more widely grown. Due to its long dormant period and tolerance (even requirement) of high light levels, *K. rugata* might be a good candidate for growing outdoors. Dormant rhizomes could be stored indoors over the winter, much as we do achimenes.

The name "lanata" means "woolly", but I have not found these plants to be much hairier than kohlerias in general. The name "rugata" means "wrinkled" but it is unclear why this name was applied.

K. spicata (*K. longifolia, K. schiedeana*) has the dubious distinction of being one of the few roadside weeds in the gesneriad family. The plants are tall growing, with leaves usually in whorls of 3-4, with 1-4 small red, yellow, or orange flowers in the axils of reduced leaves. The flowering stems produce flowers over a long period and the plants can be quite floriferous. *Kohleria spicata* is the most common and widespread species in the genus but is less variable than some of the other widespread species. It is usually found in open, sunny, disturbed habitats and forms hybrids with other species throughout its range. Distribution: Throughout Central America from Mexico to Colombia, Ecuador, and Venezuela.

There are several collections of the species in cultivation. *K. spicata* 'MacDougall' comes from Mexico and is named after its collector. More recent collections come from as far south as Ecuador. Although easy to grow and very floriferous, this species has not been used much in hybridizing, probably due to the large size of the plants and small flowers. A very small-growing selection of *K. spicata* of unknown origin was introduced by Roberts' Gesneriads in the 1980's and later given a cultivar name, 'Hanky-Panky'. This selection could be very valuable to hybridizers and should be more widely grown. The name "spicata" refers to the characteristic spike-like flowering stem.

K. trianae is a tall, shrubby species, somewhat similar to plants grown as *K. eriantha* and possibly one of the parents of those plants. The leaves are frequently red-edged, and the bright red flowers are produced on long axillary peduncles. Distribution: Colombia. This species has been in cultivation for several years but is rarely grown, probably due to its size and high light requirements. The species was named at the request of the collector for his friend J. Triana.

K. tubiflora: Like *K. spicata* this is a widespread and weedy species of open and disturbed habitats. The plants are shrubby, with strongly tubular yellow or orange flowers with a small limb. Distribution: Nicaragua to Colombia and east through Venezuela to Trinidad.

The species is somewhat similar to and possibly a close relative of *K. hondensis*. *Kohleria tubiflora* apparently hybridizes with *K. hirsuta* on Trinidad, and a natural hybrid was introduced as *K. hirsuta* 'Trinidad' (see under *K. hirsuta*). One of the early synonyms for this species is *Gesneria picta*, the "painted gesneria". The yellow and red flowers looked like they had been dipped in paint. Although the flowers are pretty and the plant easy to grow, it is rarely seen in cultivation. The species name refers to the strongly tubular flowers.

K. villosa is a relatively small kohleria that has no dormant period and produces multitudes of aerial and underground stringy rhizomes. If the plants are allowed to dry out they sometimes produce widely spaced pearl-like scales on stringy underground rhizomes. The entire plant is usually covered with long hairs. The leaves vary from bright green to very dark green with purplish undersides, sometimes marked in a distinct pattern. Although this species is fairly variable, the flowers are always small and bright red. Kvist & Skog recognize two varieties, var. *villosa* and var. *anisophylla*. Although var. *anisophylla* was originally described as a species with strongly unequal leaf pairs and much smaller flowers, the two varieties are not well-defined and intermediates occur. Plants now in cultivation seem to match var. *villosa*. Distribution: Ecuador and Colombia.

Like *Kohleria inaequalis*, this species requires lower light, higher humidity, and cooler temperatures than most kohlerias. In this respect it is similar to *Pearcea hypocyrtiflora*, which it somewhat resembles. I grow this species on a north windowsill that is downright cold in the winter; it buds up every autumn, and blooms all winter and into the spring. A new collection made in Ecuador by John Clark and distributed by the Smithsonian Institution (USBRG 98-031) has proven much easier to grow and bloom than previous collections, and deserves to be more widely grown. Due to its relatively small size and brilliantly colored flowers, this species has been of great interest to hybridizers.

K. warszewiczii includes plants formerly (and often still) grown as *K. digitaliflora*. The plants are typically large and shrubby, with flowers produced on long peduncles. The flowers are quite variable in the wild. The red or purplish tube is usually somewhat inflated, and the creamy or greenish yellow lobes are marked with purple. The calyx lobes are characteristically large and reflexed. Distribution: Colombia.

The name *Kohleria digitaliflora* still appears widely in catalogs, but this name is a synonym of *K. warszewiczii*. Plants grown as *K. digitaliflora* have a more greenish limb and a magenta, rather than dark purple or red, tube. *Kohleria warszewiczii* has been used extensively in hybridizing and is a parent of the "*Sciadotydaea* hybrids". Unfortunately, many of the plants now being grown as *K. warszewiczii* are hybrids, apparently due to misidentification of "*Sciadotydaea* hybrids" as the species. "Digitaliflora" refers to a supposed resemblance to the flowers of foxglove (*Digitalis*). It's a shame to lose this name, as it is well established and growers seem to have considerable trouble spelling "*warszewiczii*". However, the latter name honors the plant's collector, J. Warszewicz.

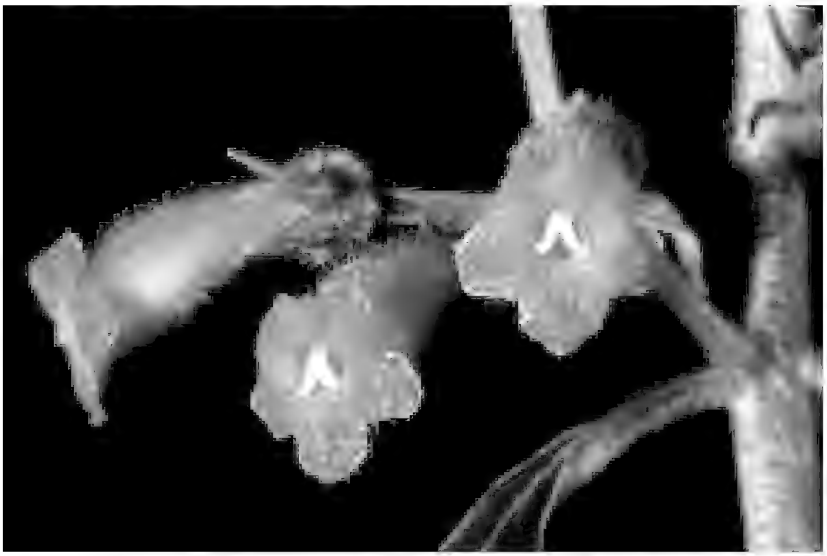
References:

Boggan, J. & L.P. Kvist. 1993. The Nomenclature of Cultivated Kohlerias. The Gloxinian 43(5): 20-24.

Kvist, L.P. 1986. Gesneriads and Snakebite. The Gloxinian 36(1): 8-12.

Kvist, L.P. 1987. Hunting *Kohleria* in Colombia. The Gloxinian 37(4): 17-21.

Kvist, L.P. & L.E. Skog. 1992. Revision of *Kohleria* (Gesneriaceae). Smithsonian Contributions to Botany 79: 1-83.



Kohleria peruviana
(photo by M. H. Stone)

Kohleria hirsuta
(photo by Michael Riley)

Coming Events

April 21-22 — New York — African Violet Society of Rochester 52nd annual judged show and sale at the Perinton Square Mall, 6720 Pittsford-Palmyra Road (Routes 250 & 31), Perinton. Saturday 2:00 to 6:00 pm; Sunday 11:00 am to 5:00 pm. Admission free; mall handicapped accessible. Contact Alvin Meyer (315-462-6616).

April 28 — Massachusetts — Annual Plant Societies' Sale of choice houseplants and perennials at the Eastern Extension Center, 240 Beaver St., Waltham. Participating: African Violet, Begonia, Gloxinia and Gesneriad, Hobby Greenhouse Societies, HortResources and Master Gardeners. Saturday 10:00 am to 3:00 pm. Admission free. Contact Dee Stewart (978-897-6822).

May 5 — Vancouver, Canada — Vancouver Violet & Gesneriad Society spring show and sale at VanDusen Gardens, Floral Hall, Oak and 37th Ave. Saturday 1:00 to 4:00 pm. Contact Melody Landers <mlanders@paralynx.com>.

May 11-12 — Ohio — Parmatown African Violet Society 41st annual show and sale "Reigning Violets" at the Parmatown Mall, West Ridgewood Drive, Parma. Friday 12:30 pm to 9:00 pm; Saturday 9:00 am to 6:00 pm. Contact Michelle Grove (440-282-3837).

May 20 — New York — Long Island Chapter of AGGS judged flower show and plant sale at Clark Botanic Garden, 193 I. U. Willets Road, Albertson. Sunday 10:00 am to 5:30 pm. Admission to show and garden free. Contact Joseph Svitak Sr. (718-658-2155 or jsvitaksr @earthlink.net).

Correction

I received a note from the Long Island Chapter correcting an error in the Awards Report for the Tampa Convention. The award they donated in honor of Ed Gaulrapp was inadvertently noted as being in memory of Ed Gaulrapp. This award was specified correctly at the convention itself, but I made an error in compiling the information for TG. My sincerest apologies to Ed for this error.

Colleen Turley, Award Chair

New address for the Turleys:
8404 West Harrison Court, Fredericksburg, VA 22407-1905

THE GLOXINIAN

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Volume 50 **Numbers 1–4**

Compiled by Judy Becker

Issue is indicated first, followed by a colon, and then page number(s).
Plant illustrations are indicated by an asterisk (*)

The Gesneriad Register of *Kohleria*

The newly revised Gesneriad Register of the genus *Kohleria* is now available. This register is over 30 pages long and includes published and registered cultivar names in the genus, as well as all known species.

Send for the 2001 *Kohleria* Register today. The cost is only $5.00 for this up-to-date wealth of information on this exciting genus. See the back cover and order your copy today from AGGS Publications.

The American Gloxinia and Gesneriad Society, Inc. is the International Registration Authority for the names of gesneriads excepting the genus *Saintpaulia*. As such, we publish this information in The Gesneriad Register and make it available to all interested parties.

Judy Becker, Registrar

How to Grow Kohlerias

John Boggan <bogganj@yahoo.com>
Dept. of Botany, NHB 166, Smithsonian Institution
Washington, DC 10670

Gesneriad growers seem to have a love/hate relationship with kohlerias. Just about everybody loves the brilliantly colored flowers with their exotic markings, but many people have trouble growing a well-behaved and floriferous plant and give up on the genus altogether. Kohlerias are surprisingly easy to grow, but well-grown specimens are rarely seen in shows. When they are, they provoke great interest from the general public and fellow gesneriad growers alike. With a little attention to their requirements, and especially by choosing some of the newer cultivars, you can grow a spectacular plant.

Soil — Kohlerias are not fussy about soil. Whatever potting mix works for your other gesneriads will work for your kohlerias; your watering habits are far more important. If you tend to water frequently or heavily, or if you grow on matting or wicks, you should use a very loose, well-drained soil. I use PRO-MIX, a standard commercial mix, with some modifications. My own customized mix is rich and fairly heavy; this way I don't have to water my plants as often, but I do have to be careful not to let them stay too wet.

Water — Careful watering pays off. Kohlerias do best when neither wet nor dry, but rather when they are kept constantly moist. Too much water will promote bacterial and fungal diseases, and too little will cause wilting, brown leaf edges, and promote rhizome production at the expense of flowers. Letting the surface of the soil dry out slightly between waterings is a good rule of thumb. Kohlerias are good candidates for wick watering, although I prefer to top-water all my own plants.

Fertilizer — Regular feeding is important, as kohlerias are rapid growers and thus tend to be fertilizer hogs. I rotate several different fertilizers, some with urea, some without; I have not found kohlerias to be urea-sensitive. Use a fertilizer with a high phosphorus content (the middle number on the fertilizer package, e.g., 15-30-15) to promote blooming. Since kohlerias are heavy feeders, I've been experimenting with soil additives with great success. To my regular potting mix, I add composted manure (plus extra perlite to compensate for its heaviness) and sometimes bone meal and green sand (a natural mineral fertilizer). This mix can burn seedlings or unrooted cuttings, but is great for repotting well-established plants.

Light — The most common mistake people make with kohlerias is not giving them enough light—and that means intensity, not day-length. They need more light than many of the commonly grown gesneriads; but contrary to what many people think, all but the largest kohlerias will do quite well under fluorescent lights. I strongly recommend using 4 tubes per shelf. I use 2 cool white plus two Grolux wide spectrum tubes and run the lights on a timer for 15 hours a day. Kohlerias, especially the larger ones, also do well in natural light in a sunny east or west window, or in a greenhouse with light shading. Direct midday sun may bleach or scorch kohleria leaves, especially if you've just moved the plant from fluorescent lights into a sunny window. It's essential to grow the plants in natural light right from the start so all the foliage will be sun-tolerant. Growing in natural light can have a dramatic effect: a properly acclimated

plant will usually be more compact, often with sturdier stems, more intensely colored foliage, and more flowers. One drawback is that plants will produce fewer flowers as the days grow shorter in the fall, and will often stop growing or go dormant. If they do, just cut back on watering and leave the rhizomes in their pots until they begin to show new growth.

Temperature and Humidity — Kohlerias like the same temperatures we do: not too cold, and not too hot. They will tolerate low humidity but the foliage will look better in higher humidity. Low humidity can cause leaf tips to turn brown and leaf edges to curl under. Sudden changes in humidity, especially, can cause leaf curl. This is harmless, but unsightly, and can spoil an otherwise show-quality plant.

Repotting — I have found that kohlerias benefit from frequent repotting and do not like being tightly potbound, probably because they dry out too quickly. As rhizomes fill the pot, the roots are crowded even more. Underpotted plants also tend to be top-heavy and fall over easily. Repotting gives you the opportunity to pot the plant deeper and bury the lower part of its stem, promoting root growth and sturdier stems. This is especially important for young plants that have not yet bloomed. All but the smallest kohlerias will eventually need a 4" pot or larger; use deep pots to accommodate their extensive root systems and rhizomes.

Propagation — Kohlerias are extremely easy to propagate. The species can be grown from seed like any other gesneriad, and nearly all kohlerias will grow easily from leaf cuttings as well, but most people grow them from either stem cuttings or scaly rhizomes. The strongest and most floriferous plants will come from rhizomes or very small, unbudded (or disbudded) tip cuttings planted directly into a basic potting mix. Either way, give the young plants plenty of light right from the start and repot frequently, burying the bottom part of the stem progressively deeper to produce a well-rooted and well-anchored plant with a minimum of bare stem. It's often recommended that budded tip cuttings be planted to produce small blooming plants. This advice dates to the days when most kohlerias were tall and lanky, and tended to fall over as they bloomed. Although this method can produce very small plants with flowers, the result often looks unnatural; and I find it to be completely unnecessary for a well-grown plant that has been given enough light, especially with the newer hybrids.

Scaly Rhizomes and Dormancy — Virtually all kohlerias produce scaly rhizomes, modified underground stems that look like fuzzy segmented worms or caterpillars. However, most do not have an obligatory dormant period like *Achimenes, Eucodonia*, or *Smithiantha*. With the hybrids especially, the rhizomes will often begin to sprout even while the parent plant is still blooming. In this case, you can either separate them and pot them up separately, or cut back the parent plant and let several of the new shoots grow up together to form a full, bushy plant with several stems. This is a good time to repot, separating or thinning out the new shoots if necessary. If the rhizomes do not sprout immediately, keep them stored in barely moist soil or vermiculite, and do not let them dry out completely. Pot them up and give them good light as soon as they show signs of sprouting. Many people make the mistake of planting rhizomes too shallowly; planting them deeper will produce a longer underground stem with a stronger root system that is more firmly anchored in the pot. The rhizome can be planted either horizontally or vertically, but the tip should be at least 1/2" below the surface, or an inch or more with larger

Kohleria 'Emily Roberts' (Roberts)
(photo by Dale Martens)

Kohleria 'Strawberry Fields' (Worley)
(photo by Irwin Rosenblum)

rhizomes. If you don't know which end is the growing tip, plant the entire rhizome horizontally about 1/2-1" below the surface of the soil.

Common Problems — Kohlerias are not especially pest-prone. The most common problems are lanky, weak-stemmed growth, and failure to bloom; both are nearly always due to insufficient light. Kohlerias must be given intense light right from the time they begin to sprout from rhizomes or are propagated as cuttings. Weak growth early on will cause problems later. But even with enough light many kohlerias are naturally weak-stemmed, and the older hybrids, in particular, will fall over unless you stake them.

Growing for Show — Following the advice above should produce a dramatic show plant with a minimum of grooming or special care. It's especially important to provide high light levels right from the start to ensure uniformly strong, sturdy growth and lots of flowers. For the best, most symmetric specimen, be sure not to crowd the plant—there should be no leaves overlapping with those of neighboring plants—and rotate it frequently to ensure even growth. Whether to grow one plant per pot, or whether to grow several together, is partly a personal choice, and partly dependent upon the growth habit of the plant. Smaller, compact plants with short internodes will often look good as a single specimen; taller plants with longer internodes often look most dramatic when planted several per pot to produce a full, shrubby specimen. During last-minute grooming, clean kohleria leaves with a soft brush, very gently and carefully since they bruise easily. It's a good idea to stake the plant before taking it to the show, since even a sturdy stem can bend or fall over during transport.

Recommended for the Beginner —

'Brimstone' (Boggan): one of the newest kohlerias, with dark gray-green foliage with a silvery-gray "feathering" pattern. The small tubular flowers are brilliant yellow and orange and show up well against the dark foliage. 'Brimstone' has sturdy stems with short internodes and rarely needs staking. It makes a good specimen plant with one stem per pot, or can be grown with several plants together to make a larger, very handsome display.

'Dark Velvet' (Wiehler): one of the larger kohlerias but always dramatic with very dark coppery leaves with red-purple undersides. The tubular flowers are orange and yellow, and may not appear until the plant gets quite large. Outstanding even without flowers, and still the best kohleria to grow as a foliage plant.

'Flirt' (Worley): probably the most popular small kohleria. 'Flirt' is a compact grower but weak-stemmed and tends to trail. It is very floriferous with intense pink flowers with red spots.

'Emily Roberts' (Roberts): an excellent choice for growing under lights; compact, sturdy, and extremely floriferous with pink flowers and mottled leaves. It makes a good specimen plant with one stem per pot.

'Strawberry Fields' (Worley): practically a guaranteed show plant, with dark mottled foliage and very large red and white flowers on a compact plant.

'Sunshine' (hybridizer unknown): recently imported from Sweden but probably of Dutch origin, produces beautiful gray-green foliage with darker veins and an abundance of large pink flowers. Easy to grow and extremely floriferous, 'Sunshine' begins to bloom at a small size but may need staking as it gets taller. The foliage spreads and the early internodes are very short so it makes a good display with one plant per pot. Plants recently imported to Canada as 'Silver Sunshine' appear to be the same plant.

Judging Kohlerias

Frances Batcheller
13 Oyster River Rd, Durham, NH 03824

AGGS judges have not had too much practice in judging kohlerias, at least not in convention shows, as so few are exhibited. This is surprising as kohlerias have so much to offer as show plants. The foliage is attractive and more resistant to damage by adverse conditions than most of the other rhizomatous genera. The blossoms are colorful in various shades of yellow, orange, light and dark red and a few purples. The petals are ornamented with spots and splashes of darker color. The blossoms hold in good condition for a considerable time, always desirable for a show plant. Bloom is not seasonal. The dormant period is often short.

The main objection to kohlerias seems to be that they may grow too tall. At the present time there are a number of more compact cultivars.

It is usually more satisfactory to start with a tip cutting which can be centered in the pot rather than starting with a rhizome which may have a mind of its own about growing direction. Perhaps planting the rhizome vertically rather than horizontally might be more successful.

Another suggestion is to use a tall pot, fill it to about one-third with soil. Then insert a cutting. Add more soil as the plant grows, taking off bottom leaves if necessary so when it reaches the top of the pot, there is little bare stem.

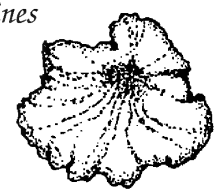
For a show plant, a kohleria should have a straight stem, be well centered in the pot, and have its bottom leaves close to soil level. Sometimes there may be several stems angled out from the center making a bushier specimen. Pinching out the tip of the plant will also make a fuller specimen.

Cultivars with short internodes are more attractive than leggier types. The amount of bloom varies with the cultivar or species. Some have one flower to the leaf axil; some have six or more. A good show plant should have a number of open blooms and terminal buds.

Leaf color differs among kohlerias ranging from very dark to light green. The lighter green leaves are sometimes patterned with darker markings. Sometimes the reverse is a dark maroon. Cultivars of *K. eriantha* usually have a fringe of red hairs around the edge.

One hybrid, John Boggan's 'Brimstone', has possibilities as an entry in the foliage class. It is compact with dark leaves having a haze of white in the center.

I hope this special *Kohleria* issue will inspire more growers to enter these attractive gesneriads in flower shows.



Kohleria 'Lucianii' (1894 hybrid)
(grown and photographed at the Smithsonsian Institution)

Kohleria 'Ampallang' (Boggan)
(grown by Ron Myhr, photo by John Beaulieu)

Kohleria 'Mother's Lipstick' (Olsson)
(grown and photographed by John Boggan)

Kohleria 'Peppermint' (Lyon)
(photo by Irwin Rosenblum)

Our Favorite Kohlerias

Ben Paternoster — Kohleria Keepers

There are two kohlerias of which I am particularly fond and seem to enjoy each time they bloom as if I was experiencing them for the first time. The first of these is *K.* 'Strawberry Fields' (*K. amabilis* × *K.* 'Longwood'), hybridized by Patrick Worley. The 1985 *Kohleria* Register describes it as having bright red flowers of good size, the tube and upper and lower lobes highly colored and heavily spotted; very compact growing and with marbled foliage. I find that description very accurate and it should explain why it is a favorite of mine and many other growers.

The other is *K.* 'Lucianii' described in the same Register as an old hybrid being introduced through the Smithsonian Institution. Leaves are soft green edged red; flowers are large, red with two or three produced per peduncle. Guess it appears as if I like large red flowers!

There are differences in the flowers that are not apparent in these descriptions. I would describe 'Strawberry Fields' as having a more flared blossom while 'Lucianii' is more tubular with purplish coloring on the lobes. 'Lucianii' can be a taller plant too.

I can't resist this opportunity to suggest direction to the hybridizers of kohlerias. In my opinion the recent hybrid from Sweden called 'Mother's Lipstick' has a most unusual and attractive flower but the plant is rangy and unattractive. If the hybridizers can obtain a very similar flower on a compact plant, it would be very worthwhile. I would also call attention to the very attractive foliage on John Boggan's hybrid, *K.* 'Brimstone', dark olive green with a grey feathery pattern along the midrib of each leaf. There is the challenge—the blossom from *K.* 'Mother's Lipstick' on a plant with the foliage and habit of *K.* 'Brimstone'.

Carol Ann Bonner — No Favorite or Many Favorites

I don't have a favorite kohleria. I might have twenty favorite kohlerias. When I finish my greenhouse addition and can spread my plants out a little more, I might find that I have thirty favorite kohlerias. But the one I want to mention, just in case no one else does, is *K.* 'Brazil Gem'. I like it because it's so different from most other kohlerias. In the very bright light of my greenhouse/laundry room where my kohlerias grow (because that space stays warmer than either of the two other greenhouses), most plants are uncompromisingly upright. I raise vigorous, sturdy plants that sometimes seem mislabeled when seen beside the same plants grown under lights. 'Brazil Gem', on the other hand, makes a crowded tuft of medium-sized grey-green leaves marked with a central lighter pattern. The leaves fill up the pot, then begin to spill over and dangle off the edge of the shelf. Even without flowers, it's quite pleasing. Admittedly, the flowers are small, but brilliant! Those little red-and-yellow blossoms popping up above the leaves are so cheery, they're down-right infectious. And that's another difference, because with most kohlerias, I marvel at the complexity of the spot pattern on the flowers, or the extreme floriferousness, or the wonderfully hairy buds as they begin to show color, but with 'Brazil Gem' I think, "That's just so cute!"

To maintain this menagerie of kohlerias, I have them sitting in standard flats without holes. (Watch for these flats at the end of the season at home improvement stores and discount department stores; I bought mine at K-Mart

for fifty cents per pack of two.) When some of the plants are a bit dry at the top of the soil, I just flood all the trays with about an inch (2.5cm) of water. Almost always, by the next day the water will be gone. Then I don't water them again until some of the plants are a bit dry. Rhizomatous plants may not want to drown, but they do really enjoy having access to plenty of water. When I have time, I water with a watering can rather than a hose so I can give the plants a dose of much-needed fertilizer.

The potting mix I prefer is about three parts Fafard No. 2 (because that's what I can get easily), one part perlite, and one part long-fibered sphagnum moss. Sometimes I add lime, sometimes I don't. Sometimes I add bone meal or whatever other interesting amendments I have on hand, but usually not. I *do* routinely overpot kohlerias because they like plenty of root room, and if they don't have it—and sometimes even when they do—they'll misbehave by sprouting out the bottoms of the pots.

I don't harvest kohleria rhizomes regularly like I do achimenes and gloxinia rhizomes. For the species and few hybrids that have any tendency to go dormant, I usually just leave them in their pots until they begin showing signs of growth, then the pots go back into the trays for full-fledged routine flooding. On the rare occasions when I do harvest rhizomes, I store them in zippered sandwich bags along with a bit of barely moist perlite or long-fibered sphagnum. When tiny pink sprouts begin to stretch from the end of the rhizomes, back they go into the pots, planted an inch to an inch-and-a-half (~2.5-3.5cm) and watered lightly until they emerge from the soil.

Suzie Larouche — 'Ampallang'

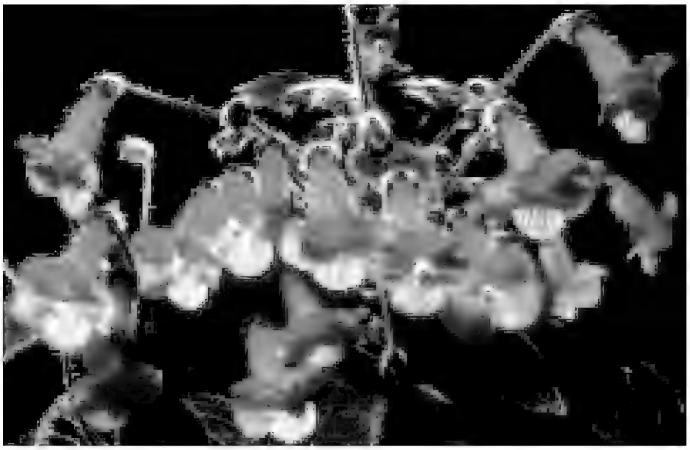
Two years ago, the first time I went to a meeting of the Toronto Gesneriad Society, Ron Myhr put a *Kohleria* 'Ampallang' in the mini show. I had never seen such a bushy kohleria. At the time, it was still hard to come by and I had to wait several months before I could get a cutting from Bill Price on one of his visits to Toronto. The cutting was a small one, but it rooted easily and grew quickly. In the spring, a few cuttings taken from the luscious plant that was now growing under the lights were rooted and transplanted in a window box on the balcony. True north exposure between tall buildings, in a polluted downtown area, was never considered ideal for any plant. Other kohlerias planted among other plants (mostly gesneriads) in the sixteen feet of boxes did grow typically long and straggly, but *K.* 'Ampallang' did not appear to mind the conditions. In fact, it grew and bloomed as well as it had indoors and soon filled the two feet of box it was meant to occupy. (The boxes, four of them, are one foot wide and one foot deep by four feet long.) It was so bushy that my cats could neither roll in it (a definite plus) nor slow it down, and it went on showing off until mid-October when I pulled it up and harvested a bag full of rhizomes. Most were given to friends, a few were potted immediately and put under lights; the rest are kept preciously for this spring's planting.

Ingrid Lindskog — For Staying Power: 'Dragon's Blood'

This was my first kohleria, from 1984—sometimes nearly invisible, sometimes filling whole windows. The first two rhizomes I could make myself part with were enough to pay for the speech of a well-known garden writer at one of our meetings. So rare were the "narrhuvor" (Joker's caps) in Sweden, they were offered for sale nowhere; only passed from hand to hand.

The buds with very long red hairs are really more attractive than the medium-sized flowers. The pink rhizomes are big and abundant but do not

Kohleria 'Tane' (Batcheller)



Kohleria 'Connecticut Belle' (Clayberg)

Kohleria 'Sunny' (Kartuz)

store well. Sometimes they are very thin and the "scales" far apart. I have noticed that this happens when the plants are in poor light and the stems are tall and weak and the green leaves are also far apart. I have not observed this in other kohlerias.

Jon Dixon — Kohlerias as Foliage Plants

We typically consider kohlerias as plants grown mainly for flowers. Their plant habit tends to be untidy with tall stems that need staking. But many kohlerias, especially less commonly grown species, have spectacular foliage. Leaves and stems of some varieties are very hairy often in colors that contrast nicely with the colors of the underlying stems and leaves. Some varieties also have colorful foliage in shades of red to gray, often patterned with patches of green or contrasting vein colors.

Among the species, those in the *amabilis* group, including the variety *amabilis*, are best known for their contributions in hybridizing both for flower color, size, and pattern as well as for compact habit. *K. amabilis* var. *amabilis* itself is a low-growing plant with leaves that typically color up with an irregular central pattern of red with green around the edges of the leaves. More light will increase the red coloring on leaves. This pattern is easily seen in hybrids with this species. The other commonly grown form, usually known as *K. bogotensis* cv. 'Gray Feather' is a plant with a much different habit from *amabilis*, such that it is hard to see the relationship. It is an upright plant growing as tall as 30 inches with leaves suffused with gray tones in a definite pattern of silver veins. This form has been successfully used by John Boggan to create the new hybrid, *K.* 'Brimstone', which has quickly become a favorite for its foliage coloring.

Less popularly grown, but to my mind even more spectacular for foliage, are the species of *inaequalis, grandiflora* and *magnifica*. The latter species is a slow grower that will make upright stems to about 20 inches. The deep green leaves and stems are wonderfully and densely covered with bristly dark red hairs. Even without flowers this species makes an exotic houseplant. Although shy to flower, it makes up for the wait with one of the most striking flowers in the genus, deep orange with contrasting black lines. Less striking in the color of the hairs, but equally hirsute, is the plant known as *K. grandiflora.* This plant is also shy to flower but makes a very large long flower in a similar color and patterning to *K. magnifica*. I haven't yet seen the flowers on *inequalis*, but it is a beautiful foliage plant with dark green stems covered with dense short red hairs.

Another colorful pattern seen in some kohleria species are dark leaves with deep red backs. This quality is inherited from the dark foliage collections of the species *tubiflora* or *hirsuta*. The dark foliage was first seen in the cultivar 'Trinidad' and was most successfully used by Hans Wiehler in his hybrid 'Dark Velvet', which John Boggan in turn used for his hybrid 'Dark Shadows'. He then carried the colorful quality into another generation of hybrids. Several plants introduced in recent years also carry the same dark foliage qualities. *K.* 'Bermuda Red', had plain green leaves when grown under lights, but in a bright greenhouse developed dark red-backed leaves. It is a tall growing plant with bright orange tubular flowers that flare or curl back at the mouth. Another cultivar grown in a sunny window that has also developed very dark leaves with red backs is *K.* 'Brazil Gem'. Its small tubular flowers flare and curl back but are orange and yellow with fine red spotting.

The future of kohleria hybridizing for the one characteristic of foliage has so many possibilities. The combination of pattern and color from the *amabilis* group added to the dark foliage from the *tubiflora* hybrids, and the potential addition of the striking hairs of *magnifica* test one's imagination. In such a scenario, the flowers become the icing on the cake for kohleria lovers.

Dee Stewart – Three with Redeeming Qualities

My favorite Kohleria? My first thought is that I don't have one – they don't grow very well for me. Then I realized there are three that I've been growing for years. They're not the prettiest I've seen, but they each must have some redeeming quality, so here they are:

I've been growing *Kohleria bogotensis* 'Gray Feather' for about ten years. The foliage is wonderful – a soft gray with a feather pattern along the veins. The quality of the color depends on the amount of light it gets. Either too much or too little light will give less than optimum leaf color. As an added bonus, 'Gray Feather' has striking red-and-yellow spotted flowers.

Kohleria 'Lucianii' is a very old hybrid. I grow it partly because it seems any hybrid that's been around this long (since 1894) should get a little help staying around longer. Mostly I grow it because I love the cherry red color of the flowers over the soft green leaves.

My third favorite is a collection of *Kohleria hirsuta* (SI 96-163) that's exceptionally compact and very floriferous. It starts blooming under a foot tall and covers itself almost non-stop with red-orange flowers.

Arleen Dewell — Old Favorites ...

When I was first introduced to the World of Gesneriads about 17 years ago, it was the genus *Kohleria* that fascinated me most. Those dramatic-looking, open-faced flowers with dots and splashes of white or another contrasting colour never failed to create a sensation in the show room. Some hybrids even had mottled or marbled foliage and soft, fuzzy hairs which only added to the endearing qualities of this genus. As a newcomer to gesneriads, growing kohlerias well and blooming them became a challenge.

As a new grower, I struggled a bit with kohlerias until I understood how to grow them best in the environment I had to offer. My first attempts produced rangy, unruly stems that insisted on trailing; not the strong, upright plants I saw exhibited in the show room. I wondered if my kohlerias needed a higher intensity of light than, for example, an African violet would to produce lush, compact growth. I decided to move all the kohlerias towards the centre of the fluorescent tubes and elevated them to bring them closer to the light source. Another thing I tried was growing them on a lower shelf where it would be cooler during the time when the lights were off. I also discovered that some of those strong, upright and beautiful plants I saw in shows had in fact been staked; and so I was delighted to find out that careful, inconspicuous staking is permitted when exhibiting kohlerias. Finally after two or three years of trial and error, I actually produced an award-winning plant with *Kohleria* 'Linda', a compact Lyndon Lyon hybrid with lots of pink-and-white speckled flowers on marbled foliage. It began blooming for me in mid to late April and continued well into October.

From that point on, there wasn't a kohleria rhizome I didn't *need* or wouldn't give a home to. Some of the hybrids that grew particularly well for me were produced by Patrick Worley in the 1980's. The "stars" that come to mind are *K.* 'Strawberry Fields', *K.* 'Jester' and one of the most dramatic kohleria hybrids ever produced, *K.* 'Red Ryder' with its large, bright red flowers and dark green, marbled foliage. Patrick also had some lovely dwarf varieties that we apartment growers appreciated: *K.* 'Flirt' and *K.* 'Clown Prince' among them, both easy to grow and endlessly blooming.

Kohleria 'Connecticut Belle' grew best for me as a basket plant, and I learned to plant the rhizomes vertically in the pot when they began to break dormancy. That way you had more influence over spacing and could better control where the new plants were going to emerge. *Kohleria* 'Lono', a Frances Batcheller hybrid, is striking with its unusual purple-violet and green flower coloring. Other taller-growing Batcheller hybrids I have tried and consider among my favourites are *K.* 'Rongo', *K.* 'Dido' with its pinkish-yellowish flowers, and *K.* 'Tane' with its wonderful bronzy-orange flowers.

Sadly, there have been no kohlerias in my collection for the past five or six years—because there are so many exciting genera to try and so little time! I know I won't be able to resist growing them again, having seen some of those gorgeous new hybrids that John Boggan has developed, like *K.* 'Ampallang' and *K.* 'Punch', to name but two. H-m-m-m. I wonder how kohlerias would do growing outside, here in the Pacific Northwest? Or, how about growing kohlerias from seed instead of rhizomes? The AGGS Seed Fund has some species to try plus a hybrid mix... who can resist for long those flashy, flamboyant kohlerias?

Kohleria Hybridizing

Patrick Worley <MrBegonyuh@aol.com>
5215 Starr Way, Watsonville, CA 95076

Kohleria hybridizing is, after a century of cultivation, still in its early stages. Early hybrids were based on a small palette of species that contributed a great array of colors. The basic flower forms and plant habits were limited. Most of the plants were large with large leaves as well. Although the species in cultivation are limited, there are compact and dwarf forms that have lent a better, more compact habit.

In my hybridizing I have selected for clear color, nice spotting and multiple flowers in each leaf axil. Many of the older hybrids have had washed-out pink colors and only one flower per leaf axil. The spotting has been weak at times and often more like a mottling and small spots.

Hybridizing is a very individual thing. I rely on my own stock plants. The stock or "stud" plants are a few species that are pollen laden and my own, mostly unnamed hybrids that when used as a parent give me a known quantity. Some examples of unnamed hybrids contain the genes for fewer and very large spots. Another unnamed stud plant has minute spots in interesting patterns. Picotee patterns with edging of dark or contrasting colors have occurred in a number of the stud plants. Large flower size and multiple flowers in the leaf axil, up to fifteen in an axil, make some of the unnamed hybrids candidates for parents in the future.

The unnamed hybrids have one or more failings that keep them from being released for general growing. A rangy habit, twisted leaves or weak stems keep the hybrids from being worthy of growing. Split corollas, uneven-growing drooping flowers and large but poorly colored flowers will keep some forever from the market.

One of the problems, often noted by would-be kohleria hybridizers, is the lack of pollen on hybrids. The inability to self pollinate or cross two F_1 selections have kept kohlerias from the rapid development and specific selection process that is commonplace in other gesneriad genera.

I repeat a cross as many times as is feasible and plant all of the seed. Often times only a few seed are formed in each pod and many times placing pollen on the stigma is no assurance that seed will be formed.

Many breaks have occurred. Plants with nearly white flowers and no spots have come up in two or three of the crosses. This is un-kohleria like but interesting. Petaloid calyces that give a doubling effect have appeared but the unsightly, distorted flowers have kept the plant a personal curiosity. The lack of pollen and the lack of fully formed stigmas have not allowed some of the more interesting, divergent plants to be used for future hybridizing programs.

With all the road blocks and frustrations in kohleria hybridizing, there is a great satisfaction in the work. Many of my hybrids are still being grown and I am always hopeful that some new species, fully loaded with pollen and great genes, will allow me to carry on with my work.

I look for these things in my stud plants and in species for inclusion in hybrids: compact habit, large flowers on strong stems, clean well-shaped leaves, and good rhizome production are all positive much-needed attributes.

I hope to have "micro" compact kohlerias with a full range of colors, clear oranges and yellows, purple and green with bold spots and unusual flower forms. The possibilities are in the genus. Putting all of the possibilities together is the job.

Next season I will be refocusing on kohlerias and will see what new hybrids I can spot among the seedlings.

Hybridizing Contest

The Gesneriad Hybridizers' Association (GHA) is sponsoring a contest at the Kansas City Convention. A brand-new gesneriad hybrid will be chosen to represent the 50th Anniversary of AGGS. Members of AGGS are eligible to participate using hybrid seed from any seed fund or any hybridizer. For rules and information, contact Dale Martens, 2728 Masters Drive, League City, TX 77573-4403 or <martens@wt.net>.

The Basics: Grooming and Housekeeping

Monte Watler <monte.watler@sympatico.ca>
240 Burnhamthorpe Rd., Etobicoke, Ont M9B 125 Canada

General Housekeeping

Grooming of plants is a very onerous but necessary task. While some growers are to be admired for their clinically clean plant rooms where "ne'r a drop of dust or a spent leaf tarries", I cannot boast of such an environment. Nonetheless, it is essential to keep your growing area tidy and free of spent leaves and blossoms. This can be done on a regular basis, and the best time is probably when you are watering. As you check each plant for watering needs, you can also scan it for dried leaves and faded blooms. Have a pair of scissors handy when watering, and snip away as you inspect each plant.

One should also set aside a specific time occasionally for a general inspection of the growing area. Remove everything from the shelves including pots, saucers, and trays. The shelves and the trays should be washed with a mild detergent to which a small amount of bleach has been added. Prior to replacing the pots, examine each one carefully for "unwanted tenants", and assess whether the plant needs pinching back, pruning, repotting, or topping up with soil. This is also a perfect opportunity to take cuttings for propagation.

Before replacing the trays, the entire area can be sprayed with disinfectant spray such as Lysol. This not only gives the plant room a pleasant odor, but it also inhibits mildew.

It is very satisfying to "clean house" this way. The growing area looks better, the plants are happier, and any infestations can be dealt with before they spread too far.

Foliage must be clean and free of dust in order for plants to breathe. A soft brush is essential. It should be drawn gently across the leaves from the stem to the tip, removing the dust and lint which may have settled thereon. Stubborn bits of lint, or water stains, may be removed by using a damp tissue and lightly tapping the soiled spots. Cotton swabs are also useful for this purpose.

Preparing Your Plants for Show

General grooming means keeping your plants free of all spent flowers, dead leaves, and dust, and keeping the plant in an overall good condition. Grooming your plants for exhibition is a little more intricate, and many details have to be considered.

Symmetry of Form: Depending on the growth habit of the plant, one has to keep it as symmetrical as possible to make an acceptable showing. For plants such as saintpaulias, petrocosmeas, episcias, sinningias, and most chiritas, this is absolutely obligatory.

Even though plants such as columneas, aeschynanthus, and codonanthes are inclined to grow in all directions, they can be kept in a balanced order by periodically pinching and layering the stems. A well-balanced plant is definitely more attractive than one that has been allowed to go wild in every direction.

Quantity and Quality of Blooms: If a plant is being entered in a class that requires bloom, then it should have a fair amount. This is sometimes related to the size of the plant, the amount of foliage, and the type of plant

being judged. Plants such as saintpaulias, streptocarpus, and kohlerias are very floriferous and should boast a great deal of bloom. Shy bloomers such as some of the chiritas may be quite acceptable with a lesser amount. Judges will also take into consideration the difficulty in blooming certain species.

By careful manipulation, a plant with a few scattered blossoms can be made to look quite attractive by bringing the blooms together at the center of the crown. This works very well with saintpaulias, petrocosmeas, sinningias, and streptocarpus.

Condition/Culture: This covers a multiple of chores. Ensure a fresh and healthy appearance through the removal of ugly stubs or stalks and discolored, mis-shapen or superfluous leaves. Even the removal of a healthy leaf may sometimes improve the appearance of the plant. Elongated necks and bare stems can be camouflaged either by repotting or by covering the top of the soil with sphagnum moss in order to cover the bare spots. All markers, stickers and props must be removed from the plants. A sticker or a plant label left on the pot will result in a deduction of points.

Over- and under-potting is also taken into consideration. While there is no remedy for over-potting except to reduce the size of the pot, underpotting can be easily corrected by potting in a larger pot or by placing the smaller pot in the appropriate size pot and filling it with soil or sphagnum moss in order to ensure that no sign of double potting is visible.

Plants must be absolutely insect- and disease-free. If in doubt, leave the plant at home, otherwise it will be disqualified.

Careful packing and handling of plants is necessary, as a quick unexpected turn of the hand may snap a leaf or two.

Grooming your plants when they are on the dry side is advisable. In that condition the plant is more pliable and the leaves are not brittle, which means manipulation without damage is possible. I would also suggest that you pack and transport your plants in this condition as well, but at the same time be careful that the plants are not damaged due to prolonged drying out.

Look for "The Basics: Propagation" in the next issue of THE GLOXINIAN.

Redefined, Revived and New Genera of South East Asian Gesneriaceae: The Revived and Ill-known Genus *Raphiocarpus*

A. Weber, Institute of Botany, University of Vienna
B.L.Burtt, Royal Botanic Garden Edinburgh

Raphiocarpus is the one genus discussed in this series that has no representative further south than central Vietnam. It was given as a synonym of *Didissandra* in the Flora of China (1990, 1998), but none of the five species recorded there can be referred to *Didissandra* in its restricted sense, and the same applies to the five species from Vietnam placed under *Didissandra* by Pellegrin (in Leconte, Fl. Gen. Indo-Chine, 4: 508-512, 1930).

Raphiocarpus included only one species when first described. This species, *R. sinicus*, is a rather unusual gesneriad, for it is a shrub with rather stiff (?evergreen) glabrous leaves; the flowers and fruits, however, are quite typical. The species is found in the mountains along the Chinese-Vietnamese border.

The species of China and Vietnam previously referred to *Didissandra* do not form a homogeneous group, and indeed it would cause no surprise to find that they are referred to more than one genus when they are better known. However, there are several species of which neither fruit nor seed is available for study, and either of these might yield valuable taxonomic characters. Our attempts, for instance, to separate the shrubs from the herbs proved unconvincing and we perforce came to the conclusion that our immediate action could go no further than replacing the incorrectly used *Didissandra* by the one generic name that was available, namely *Raphiocarpus*.

A shrubby species that is certainly congeneric with *R. sinicus* is *R. clemensiae* from the coastal ranges near Tourane in central Vietnam; and there may be one or two more species undescribed. Moving from the shrubs to the herbs, the most divergent habit is undoubtedly found in *R. sesquifolius*, a species that has long been known from Mt. Omei (= Mt. Omi = Emeishan) and nearby in S. Sichuan. This species has an underground rhizome from the end of which grows the flowering stem; this is 15-25 cm high, naked except for one pair of very unequal leaves at the top; the discrepancy in size is so great that C.B.Clarke, who named the species (in *Didissandra*), chose the epithet *sesquifolius* meaning 1-1/2 leaves (but in fact the small leaf is seldom more than one third the length of the larger). The flowers are borne singly, or up to four in a short inflorescence and arise in the axil of the larger leaf. The corolla is trumpet-shaped, purple, and up to 7 cm long.

The remaining species fall between this dwarf herb (the flowering stem is clearly of annual duration) and the shrubby species in habit. They are caulescent herbs with well-spaced leaf-pairs and axillary inflorescences with short or long peduncles and flowers only slightly shorter than in *R. sesquifolius.*

At present, *Raphiocarpus* comprises 11 species, but its true size and circumscription can only be discussed critically when more complete materials are collected.

Raphiocarpus petelotii
(photo by M. Möller, Edinburgh)

Emarhendia bettiana
(photo courtesy of A. Weber)

Redefined, Revived and New Genera of South East Asian Gesneriaceae: The New Malayan Genera *Emarhendia*, *Senyumia* and *Spelaeanthus*

A. Weber, Institute of Botany, University of Vienna
B.L.Burtt, Royal Botanic Garden Edinburgh

When Burtt (1984) revised the *Boea-Paraboea*-alliance, he encountered two Malayan species, originally described as *Boea minutiflora* and *Paraboea bettiana*, that did not fit in either genus. The same applies for a third species, only recently collected in Malaysia. All three species grow on limestone, around the entrance of caves, and have a roughly similar habit: leaves with long, sticky hairs and small whitish flowers with two stamens with connate anthers. Detailed investigation of the floral and the fruit characters (carried out in cooperation with Dr. Ruth Kiew, formerly at the Universiti Pertanian Malaysia, Serdang, now at the Botanic Garden Singapore) and karyological features, however, provided no evidence that the plants are closely related to each other. Thus the conclusion was reached that they should be placed, at least until better evidence becomes available, in separate new genera. At the moment, the three genera include only a single species each, but in *Emarhendia* and *Spelaeanthus* there is local variation and the latter may include a second species from Vietnam.

The genus ***Emarhendia*** is based on *Paraboea bettiana*. The plant is only known from the limestone area some 20 km west of Kuantan (Bukit Charas, Bukit Sagu and smaller outcrops) in the state of Pahang. The flowers are white and light lilac, obliquely campanulate and bistaminate. On the upper lip they bear two conspicuous patches of glands. These glands secrete a kind of fatty oil, the function of which is unknown, but may play a role in pollination. The fruit is straight and opens only along the upper side. It is held horizontally and recalls a miniature copy of a *Henckelia* fruit. Chromosome number is n = 8.

Emarhendia bettiana

Glands on upper petals

Senyumia minutiflora

The genus ***Senyumia*** is based on *Boea minutiflora* Ridl., originally found in the huge limestone caves of Gunung Senyum (Pahang). Unlike the other two genera, the leaves are lanceolate, the minute flowers flat-faced with recurved lobes, the two large yellow anthers are coherent and open by a pore at the tip. These characters, as well as the lack of a disc, constitute the typical syndrome of pollen flowers with few stamens. The most unusual fact is that the flowers are resupinate, the upper lip directing downwards. The fruits are cylindrical capsules and dehisce by two strongly twisted valves. Chromosome number is n = 9.

The genus ***Spelaeanthus*** is based on a new species collected first by S. C. Chin in 1971 in the Batu Luas caves in Taman Negara National Park, but it has a wider distribution in limestone areas of Pahang and Kelantan. It has small, obliquely campanulate white flowers. The short fruits have straight to slightly twisted valves. Chromosome number is n = 8.

Spelaeanthus chinii
(all photos and illustrations courtesy of A. Weber)

American Gloxinia & Gesneriad Society, Inc.

Financial Statement — January 1, 2000 to December 31, 2000

GENERAL FUND — Combined Receipts, Checking and Savings		
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Donations		
Fund for Progress		3,242.00
Color Photo Sponsorships		1,894.00
Miscellaneous Receipts		1,678.00
Total — Combined Balances		**$43,760.00**
(Checking $27,025.00 / Savings $16,735.00)		
GENERAL FUND		
Checking Account — Beginning Balance, December 31, 1999		20,798.00
Add from Combined Balances Above		27,025.00
Other Revenue		
Misc. - Held for expenses		15,000.00
Research Grant		600.00
Held for Convention expenses		27,781.00
Total Receipts — Checking		**$91,204.00**
DISBURSEMENTS		
Publication of THE GLOXINIAN		(30,056.00)
Other Publications		(2,203.00)
Membership Processing		(674.00)
Chair Expenses		(2,648.00)
Operating Expenses		(35,763.00)
Stipends	(3,400.00)	
Liability Insurance	(2,231.00)	
Convention Advances – 2000	(500.00)	
" Advances – 2001	(142.00)	
" Expenses – 1999	(484.00)	
" Remits – 2000	(27,714.00)	
Miscellaneous Remits	(692.00)	
Grant	(600.00)	
Total Disbursements		(71,344.00)
Total on Hand, Checking — December 31, 2000		**$19,860.20**
GENERAL FUND — Savings		
Beginning Balance – December 31, 1999		30,736.00
From Combined Balances		16,735.00
Interest		1,381.00
Convention Receipts, Gross		34,245.00
Total Receipts		83,097.00
Less Credit Card Fees	(1,108.00)	
" " " Refunds and Supplies	(319.00)	
" Convention Expenses	(28,112.00)	
Miscellaneous		
Transfer to Checking for Remits	(15,000.00)	
Investment in 7% CD (Key Bank NA)*	(10,000.00)	
Bank Fee, Supplies	(12.00)	
Total Disbursements		(54,551.00)
Savings Balance, December 31, 2000		**$28,546.51**

GENERAL FUND

Checking Account		19,860.20
Savings Account		28,546.51
Mutual Funds, Safeco Intermediate Term Treas	7,373.77	
" " " " " Muni	7,689.71	15,063.48
Total – General Fund – December 31, 2000		**$63,470.19**
*Note 10,000 CD transferred to EMREF		

ELVIN McDONALD RESEARCH ENDOWMENT FUND

Balance – December 31, 1999		1,420.56
Donations		280.00
Interest – Savings		71.13
Grant		(600.00)
CD #1 @ 7% APY		10,525.20
CD #2 @ 6.15% APY		2,059.16
Savings Balance	1,171.69	
Balance, Cert of Deposits, Total	12,584.36	
Ending Balance, December 31, 2000		**$13,756.05**

INTERNATIONAL GESNERIAD REGISTER FUND

Balance – December 31, 1999		12,171.28
Sale of Registers		845.89
Savings Interest		123.18
Interest on CD @ 6.50% APY		504.50
Transferred to EMREF, see above		(2,000.00)
Balance on Certificate of Deposit	7,884.79	
Balance in Savings Account	3,760.06	
Ending Balance December 31, 2000		**$11,644.85**

FRANCES BATCHELLER ENDOWMENT FUND

Balances — Combined, December 31, 1999		129,828.16
Change in Value – Mutual Funds as of December 31, 2000		
Fidelity – Asset Manager @16.82		1,126.30
Safeco – Intermed Term Treas, and Municipals (2)		2,436.59
Life Memberships		1,050.00
Donations		620.00
Convention Auctions		4,938.00
Interest Earned to December 31, 2000:		
Key Bank NA, Cert of Deposit, #1 @ 5.75 % APY	2,066.98	
Wa Fed, Certificate of Deposit #2 @ 6.00 % APY	207.77	
Wa Fed, Certificate of Deposit #3 @ 6.00 % APY	900.99	
Savings Account, Key Bank NA	219.65	
		3,395.39
Balances, December 31, 2000		
Savings	8,845.59	
Certificate #1	37,952.54	
Certificate #2	4,125.73	
Certificate #3	15,910.58	
Fidelity MF	48,393.28	
Safeco MF	28,166.72	
Totals	143,394.44	
Combined Balances, Frances Batcheller Endowment Fund		**$143,394.44**

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